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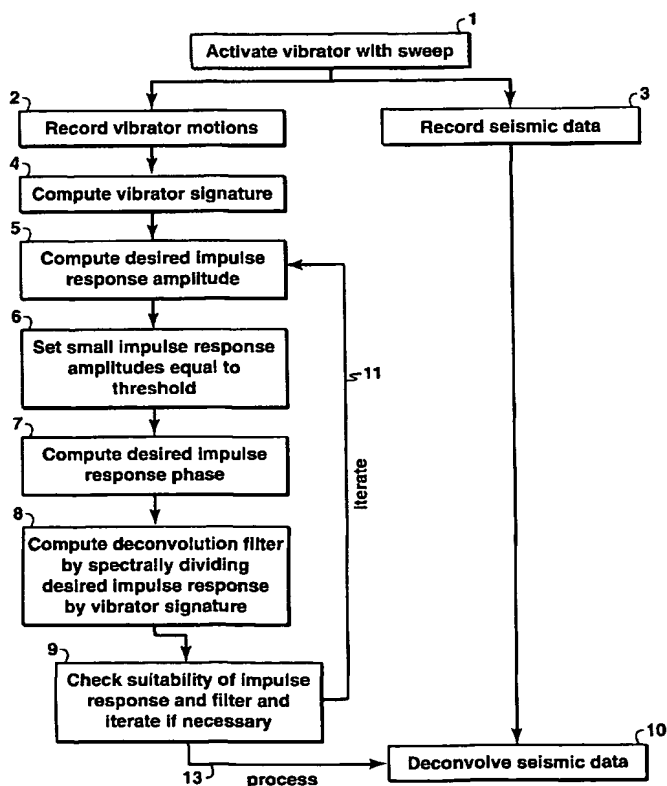
(43) International Publication Date
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number
WO 2004/095073 A3

- (51) International Patent Classification⁷: **G01V 1/00**
- (21) International Application Number:
PCT/US2004/004334
- (22) International Filing Date: 13 February 2004 (13.02.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/459,550 1 April 2003 (01.04.2003) US
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- (75) Inventor/Applicant (for US only): **KROHN, Christine, E.** [US/US]; 1827 Nocturne, Houston, TX 77043 (US).
- (54) Title: **SHAPED HIGH FREQUENCY VIBRATORY SOURCE**
- (57) Abstract: The present invention is a method of processing seismic data in which one or more seismic vibrators are activated with one or more pilot signals and vibrator motions are recorded along with seismic data. Vibrator signatures (4) are computed from measured vibrator motions (2), such as the ground force signal. A desired impulse response (5) is specified from either a measured vibrator motion (2) or from test data or field data from a location near the location from which the seismic data was acquired. A deconvolution filter (8) is computed from the impulse response (5) and from the vibrator signatures (4) from multiple vibrators and sweeps (1). The deconvolution or deconvolution and separation filter (8) is used to process the seismic data. The vibrators are then moved to a new location, and the activation is repeated.

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GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designation US
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
24 March 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/04334

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01V 1/00

US CL : 367/43,46,47,48; 702/14,17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 181/111

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,418,079 B1 (Fleure) 9 June 2002 (09.06.2002) column 6, lines 15-36; column 7, lines 1-14	1-2, 12, 26-27, 33
A	US 6,687,619 B2 (Moerig, et al) 3. Feb. 2004 (03.02.2004) column 8, lines 13-35	1, 26
A	US 6,766,256 B2 (Jeffryes) 20 Jul. 2004 (20.07.2004) columns 5-10, Figs. 9-10	1-46
A	US 5,410,517 A (Anderson) 25 April 1995 (25.04.1995) column 4, lines 39-44	17-19, 39-41
A	US 5,550,786 A (Allen) 27 Aug. 1996 (27.08.1996) column 2, lines 23-47; column 5, lines 1-65	1-3,6-7, 10, 26-28
A	US 5,719,821 A (Sallas, et al) 17 Feb. 1998 (17.02.1998), column 4, lines 34-63; columns 11-12; column 18, lines 11-27	1,8,10,26
A	US 6,161,076 A (Barr, et al) 12 Dec. 2000 (12.12.2000) column 5, lines 19-68; column 7 line 56 - column 9 line 48; column 11, lines 1-50	1-7, 10, 12-22, 26-28, 31, 34-44
A	US 5,400,299 A (Trantham) 20 Aug. 1995 (20.08.1995) column 4, line 60 to column 5, line 6; column 6, line 1 to column 8, line 58; Figs. 1-3	1-46



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

23 November 2004 (23.11.2004)

Date of mailing of the international search report

18 JAN 2005

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